

## **ABSTRACT OF THE DISCLOSURE**

This invention produces data packets that can vary in length and/or data compression ratio. First, an algorithm is employed to transform a data signal into fixed or variable length data packets at variable data compression ratios. If the algorithm produces fixed length data packets, the fixed length data packets are then  
5 converted to variable length data packets, which include only the valid data bytes of the fixed length data packets. Finally, the variable compression ratio, variable length data packets are provided with length codes at each end of each data packet to facilitate bi-directional searching and decompression. The transition from fixed to variable length data packets employs a buffer which stores the fixed length data  
10 packets until the fixed length data packets are converted to variable length data packets. The variable length, variable compression ratio data packets require a reduced amount of transmission and/or storage space and increase the reproduction quality of the stored and/or transmitted data.